

CLAIMS

What is claimed is:

1. A computer-implemented method comprising:

5 analyzing a computer-servable document written for a particular locale;
and

extracting locale-sensitive content from the document while leaving
locale-independent elements in the document.

10 2. A computer-implemented method as recited in claim 1, wherein
the analyzing comprises examining each line of code in the document and
based on the code, identifying the locale-sensitive content.

3. A computer-implemented method as recited in claim 1, wherein

15 the locale-sensitive content comprises natural language text.

4. A computer-implemented method as recited in claim 1, wherein

the locale-independent elements comprise source code and formatting data.

20 5. A computer-implemented method as recited in claim 1, further
comprising storing the locale-sensitive content in a data structure separate from
the document.

6. A computer-implemented method as recited in claim 5, further comprising substituting a function call in place of associated locale-sensitive content in the document, the function call being configured such that, when executed, the function call obtains the locale-sensitive content from the data structure.

7. A method comprising:

examining source code in a document written for a particular locale;

determining, from the source code, locale-sensitive content that is

10 specific to the particular locale;

extracting the locale-sensitive content from the source code;

storing the locale-sensitive content in a separate file; and

inserting, into the document in place of the locale-sensitive content, a reference to the locale-sensitive content in the separate file.

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8. A method as recited in claim 7, wherein the locale-sensitive content comprises natural language text.

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9. A method as recited in claim 7, wherein the determining

comprises:

ascertaining a type of code elements using a grammar for the source code; and

identifying, based on the type of the code elements, any locale-sensitive content delimited by the code elements.

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10. A method as recited in claim 7, wherein the storing comprises storing the locale sensitive content in a structured text file.

11. A method as recited in claim 7, wherein the storing comprises storing the locale sensitive content in a database file.

12. A method as recited in claim 7, wherein the reference comprises 5 a function call that, when executed, obtains the locale-sensitive content from the separate file.

13. A method comprising:

10 automatically compiling a computer-servable document written for a particular locale to extract any locale-sensitive content, the compiling producing a compiled document with locale-independent elements; and

storing the locale-sensitive content in a form that can be translated to other locales.

15 14. A method as recited in claim 13, wherein the locale-sensitive content comprises natural language text.

16. A method as recited in claim 13, wherein the locale-independent elements comprise source code and formatting data.

20 16. A method as recited in claim 13, further comprising substituting a reference in place of the locale-sensitive content in the compiled document, the reference identifying the locale-sensitive content extracted from the compiled document.

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17. A method as recited in claim 13, further comprising substituting a function call in place of the locale-sensitive content in the compiled document, the function call being configured such that, when executed, the function call obtains and embeds the locale-sensitive content back into the compiled document.

18. A method as recited in claim 13, further comprising retrieving, at runtime, the compiled document and populating the compiled document with the locale-sensitive content to reconstruct the computer-servable document that can be served to the particular locale.

19. A method as recited in claim 13, wherein the locale-sensitive content is translated in to a second version for use in a second locale, further comprising retrieving, at runtime, the compiled document and populating the compiled document with the second version of the locale-sensitive content to construct a computer-servable document that can be served to the second locale.

20. A method comprising:

20 compiling a computer-servable document written for a particular locale to extract any locale-sensitive content, the compiling producing a compiled document with locale-independent elements;

storing the locale-sensitive content; and

at runtime, retrieving the compiled document and populating the

25 compiled document with the locale-sensitive content.

21. A method as recited in claim 20, wherein the locale-sensitive content comprises natural language text.

22. A method as recited in claim 20, wherein the locale-independent 5 elements comprise source code and formatting data.

23. A method as recited in claim 20, wherein the storing comprises storing the locale-sensitive content in a structured text file.

10 24. A method as recited in claim 20, wherein the storing comprises storing the locale sensitive content in a database file.

25. A method as recited in claim 20, further comprising:
substituting a function call in place of associated locale-sensitive content
15 in the compiled document; and
the populating comprises executing the function call in the compiled document to obtain the associated locale-sensitive content and insert the associated locale-sensitive content back into the compiled document.

20 26. A method as recited in claim 20, further comprising:
storing one or more translated versions of the locale-sensitive content;
and
at runtime, retrieving the compiled document and populating the compiled document with a translated version of the locale-sensitive content.

27. A method for producing a document to be served to a user in a particular locale, comprising:

retrieving a locale-independent core that contains locale-independent elements; and

5 populating the locale-independent core with locale-sensitive content that is appropriate for the particular locale.

28. A method as recited in claim 27, wherein the locale-sensitive content comprises natural language text.

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29. A method as recited in claim 27, wherein the locale-independent elements comprise source code and formatting data.

30. A method as recited in claim 27, wherein the locale-independent 15 core contains a function call in place of where corresponding locale-sensitive content reside in the document, and the populating comprises executing the function call to obtain the locale-sensitive content and insert the locale-sensitive content into the core.

20 31. A method as recited in claim 27, wherein multiple translations of the locale-sensitive content exist for multiple locales, and further comprising populating the locale-independent core with a translation of the locale-sensitive content, the translation being suitable for a corresponding locale to which the document is to be served.

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32. A system comprising:

at least one computer-servable document stored in a computer-readable medium, the document being written for a particular locale; and

a compiler to automatically extract locale-sensitive content from the document to produce a compiled document containing locale-independent elements.

5 33. A system as recited in claim 32, wherein the locale-sensitive content comprises natural language text.

34. A system as recited in claim 32, wherein the locale-independent elements comprise source code and formatting data.

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35. A system as recited in claim 32, wherein the compiler examines source code in the document to determine, from the source code, whether locale-sensitive content is present.

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36. A system as recited in claim 32, wherein the compiler stores the locale-sensitive content in a data structure separate from the compiled document.

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37. A system as recited in claim 36, wherein the compiler inserts a reference in place of the locale-sensitive content in the document, the reference identifying the locale-sensitive content in the data structure.

38. A system as recited in claim 36, wherein the compiler substitutes a function call in place of associated locale-sensitive content in the compiled document, the function call being configured such that, when executed, the function call obtains the associated locale-sensitive content from the data structure and inserts the associated locale-sensitive content back into the compiled document.

39. A system as recited in claim 32, further comprising a runtime manager that, prior to serving, populates the compiled document with the locale-sensitive content.

40. A system as recited in claim 32, wherein the locale-sensitive content is translated into at least one translated version of the content, further comprising a runtime manager that populates the document with the translated version of the content.

41. A compiler system comprising:
a grammar containing rules for structuring source code;
a content analyzer to analyze source code in a document written for a particular locale and to utilize the grammar to determine whether the source code contains locale-sensitive content that is specific to the particular locale, the content analyzer being configured to replace the locale-sensitive content in the source code with associated references to the replaced locale-sensitive content.

42. A compiler system as recited in claim 41, wherein the locale-sensitive content is placed in a separate file, and the references comprise a pointer to that file.

5 **43.** A compiler system as recited in claim 41, wherein the locale-sensitive content is placed in a separate data structure, and the references comprise function calls that, when executed, obtain the associated locale-sensitive content from the data structure and insert the associated locale-sensitive content into the source code.

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44. A compiler system as recited in claim 41, further comprising:
a call library to store function calls; and
the content analyzer replaces the locale-sensitive content with one or
more function calls from the call library, the function calls being configured
15 such that, when executed, the function calls reinsert the locale-sensitive content
back into the source code.

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45. A system comprising:
a resource bundle containing locale-specific content that is authored for
a particular locale; and
a resource bundle manager to populate a locale-independent document
core with the locale-sensitive content in the resource bundle to produce a
computer-servable document that is suitable to be served to the particular
locale.

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46. A system as recited in claim 45, wherein the resource bundle is
embodied as one of a structured text file or a database file.

47. A system as recited in claim 45, wherein the locale-specific content comprises natural language text.

48. A system as recited in claim 45, wherein the document core 5 contains source code and function calls embedded within the source code, the resource bundle manager being configured to execute the function calls to reinsert associated locale-specific content into the document core.

49. A system comprising:

10 compilation means for compiling a computer-servable document written for a particular locale to extract any locale-sensitive content, the compilation means producing a compiled document with locale-independent elements; and
storage means for storing the locale-sensitive content extracted from the computer-servable document in a data structure separate from the compiled 15 document.

50. A system as recited in claim 49, wherein the compilation means comprises substitution means for substituting a reference in place of the locale-sensitive content in the compiled document, the reference identifying the 20 locale-sensitive content extracted from the compiled document.

51. A system as recited in claim 49, further comprising runtime means for populating, at runtime, the compiled document with the locale-sensitive content to reconstruct the computer-servable document.

52. A system as recited in claim 49, wherein the locale-sensitive content is translated in to a second version for use in a second locale, further comprising runtime means for populating, at runtime, the compiled document with the second version of the locale-sensitive content to construct a computer-servable document that can be served to the second locale.

53. A system comprising:
retrieval means for retrieving a document core containing locale-independent elements; and

10 populating means for populating the document with locale-sensitive content to produce a computer-servable document that is appropriate for serving to a particular locale.

54. A system as recited in claim 53, wherein multiple translations of the locale-sensitive content exist for multiple locales, the populating means comprises populating the document core with a translation of the locale-sensitive content to produce a computer-servable document that is suitable for serving into another locale.

20 55. One or more computer-readable media comprising computer-executable instructions that, when executed, direct a computer to:

examine source code in a document written for a particular locale;
extract any locale-sensitive content from the source code;
store the locale-sensitive content in a separate file; and

25 substitute, in place of the locale-sensitive content in the document, a reference to the locale-sensitive content in the separate file.

56. One or more computer-readable media comprising computer-executable instructions that, when executed, direct a computer to:

retrieve a core file containing source code and locale-independent elements; and

5 populate the core file with locale-sensitive content that is appropriate for a particular locale to produce a document that can be served to the particular locale.